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09/865,295	05/24/2001	Gianpaolo Barozzi	CISCP678	5183

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EXAMINER	
SINGH, DALZID E	
ART UNIT	**PAPER NUMBER**
2613	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/865,295	BAROZZI ET AL.	
	Examiner	Art Unit	
	Dalzid Singh	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6, 8, 17, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelty et al (US Patent No. 6,690,884).

Regarding claim 1, Kelty et al discloses optical transmission system, shown in Fig. 4, comprising:

at a first intermediate location along said link, separating a portion of an optical signal traveling along said link to form a first measurement optical signal (as shown in Fig. 4, optical distributor (30) separates portion of optical signal to form first measurement signal);

detecting said first measurement optical signal to form a first measurement electrical signal (the monitor circuit (38) detects the first measurement optical signal and form a first electrical signal); and

performing error correction decoding on said first measurement electrical signal to generate an indication of correct receipt of data at said first intermediate location (see col. 7, lines 1-20).

Regarding claim 2, as discussed above, and in col. 7, lines 58-65, Kelty et al discloses using said indication of correct receipt of data at said first location to determine a fault along said link prior to said first intermediate location (FEC monitoring help identify source of error).

Regarding claim 3, in col. 7, lines 1-19, Kelty et al discloses isolating a portion of a particular wavelength component of said optical signal.

Regarding claim 4, Kelty et al discloses that the system comprise:

at a second location along said link, separating a portion of an optical signal traveling along said link to form a second measurement optical signal (as shown in Fig. 2, Kelty et al shows dist (30) separates the portion of the optical signal);

detecting said second measurement optical signal to form a second measurement electrical signal (the monitor circuit (38) detects the first measurement optical signal and form a first electrical signal); and

performing error correction decoding on said second measurement electrical signal to generate an indication of correct receipt of data at said second intermediate location (see col. 7, lines 1-20).

Regarding claim 6, Kelty et al discloses optical transmission system, shown in Fig. 4, comprising:

a coupler that separates a portion of an optical signal traveling along said link (as shown in Fig. 4, optical distributor (30) separates portion of optical signal to form first measurement signal);

an optical receiver that recovers data based on said portion of said optical signal (see col. 7,lines 1-19);

error correction decoding circuit that identifies number of detected errors in receipt of said data; and a link verification stage that generates an indication of link operation based on errors identified by said error correction decoding circuit (see col. 7,lines 1-19).

Regarding claim 8, in Fig. 5, Kawano discloses an optical amplifier that boosts portion of said optical signal (in col. 1, lines 54-56, Kawano discloses erbium-doped fiber for amplifying the optical signal).

Regarding claim 17, Kelty et al discloses optical transmission system comprising:

means for separating a portion of an optical signal traveling along said link (as shown in Fig. 4, Kelty et al shows DIST (30) to separate portion of optical signal which is measured and compared);

means for recovering data based on said portion of said optical signal (the monitor recovered data in order to be monitored);

means for identifying errors in receipt of said data; and means for generating an indication of link operation based on errors detected by said error identifying means (see col. 7, lines 1-19 and 58-65).

Regarding claims 22 and 23, Kelty et al discloses optical transmission system comprising:

means for receiving indications of whether a data optical signal is received successfully from a plurality of monitor locations along an optical link; and means for

determining a location of said fault to be beyond a last monitor location receiving said optical signal successfully (see col. 7,lines 1-19 and 58-65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 11-13, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelty et al (US Patent No. 6,690,884).

Regarding claims 11, 16 and 21, Kelty et al disclose optical receiver for receiving the separated signal that generates an electrical signal based on said portion of said optical signal. Kelty et al differ from the claimed invention in that Kelty et al does not specifically disclose a demodulator that recovers data from said electrical signal. However, since data signal is modulated, therefore it would have been obvious that a demodulator can be incorporated to further recover data or information modulated within the optical signal.

Regarding claim 12, Kelty et al discloses optical transmission system, as shown in Fig. 4, comprising:

a first link monitor that monitors performance of said link at a first intermediate location along said link (as shown in Fig. 4, optical distributor (30) separates portion of optical signal to form first measurement signal); and

wherein said first link monitor comprise:

a coupler that separates a portion of an optical signal traveling along said link (Kelty et al shows dist (30) separates the portion of the optical signal);

an optical receiver that recovers data based on said portion of said optical signal (see col. 7, lines 1-19);

error correction decoding circuit that identifies error in receipt of said data (see col. 7, lines 1-19); and

a link verification stage that generates an indication of link operation based on a number of errors detected by said error correction decoding circuit (see col. 7,lines 58-65).

Kelty et al differs from the claimed invention in that Kelty et al do not disclose a second link monitor that monitors performance of said link at a second intermediate location along said link. However, in col. 7, lines 58-65, Kelty et al suggest monitoring FEC at various points. Therefore, it would have been obvious to an artisan of ordinary skill in the at the time the invention was made to provide second link monitor in order to monitor optical performance at another location.

Regarding claim 13, Kelty et al discloses that a fault is located based on said indications of link operation from said first link monitor and said second link monitor (see col. 7,lines 58-65).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelty et al (US Patent No. 6,690,884) in view of Levy et al (US Pub. No. 2003/0210908).

Regarding claim 5, Kelty et al disclose monitoring and indicating faults and differs from the claimed invention in that Kelty et al do not locate fault by using indication of correct receipt of data at first and second location. Levy et al teach performance monitoring system used in optical communication in which each location is monitored for correct receipt of data (see paragraphs [0012-0016]) and determine location of faults. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to locate faults by using indication of correct data receipt in order to determine exact location of faults.

6. Claims 7, 9, 10, 14, 15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelty et al (US Patent No. 6,690,884) in view of Fujita et al (US Patent No. 6,204,959).

Regarding claims 7, 14 and 18, in col. 5, lines 3-20, Kelty et al disclose wavelength selective which select a particular wavelength and differs from the claimed invention in that Kawano does not disclose a filter that isolates a particular wavelength component of said portion of said optical signal for input to said optical receiver. However, it is well known to provide optical filter to isolate a particular wavelength. Fujita et al is cited to show such well known concept. In col. 4, lines 40-49, Fujita et al disclose filter to isolate a particular wavelength. Therefore, it would have been obvious to an artisan of ordinary skill in the art to provide such filter to the system of Kawano.

One of ordinary skill in the art would have been motivated to do such in order to reduce or eliminate noise within the optical signal.

Regarding claims 9, 15 and 19, as discussed above, Fujita et al further disclose that the filter is a tunable filter (see col. 4, lines 40-49), which be tuned to a selected wavelength component.

Regarding claims 10 and 20, as discussed above, Fujita et al further disclose that the filter is a tunable filter (see col. 4, lines 40-49), therefore it would have been obvious that the filter can be tuned to a selected wavelength component.

7. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy et al (US Pub. No. 2003/0210908) in view of Kelty et al (US Patent No. 6,690,884) in view of Wei et al (US Patent No. 6,515,967).

Regarding claim 24, Levy et al discloses optical communication system comprising:

means for receiving indications of whether a data optical signal is received successfully from a plurality of monitor locations along an optical link (paragraphs [0012-0013, 0022]); and

means for determining a location of said fault to be beyond a last monitor location receiving said optical signal successfully (see paragraph [0014-0016).

Levy et al differs from the claimed invention in that Kawano does not disclose detecting number of error at each monitor locations. Kelty et al teach optical performance monitoring which determine fault based on number of detected error (see

col. 7, lines 1-19 and 58-65). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to method or performance monitoring by detecting number of errors as taught by Kelty et al. One of ordinary skill in the art would have been motivated to do this in order to isolate and distinct faults.

Furthermore, the combination of Levy et al and Kelty et al discloses optical transmission system and method for monitoring and detecting fault as discussed above and differ from the claimed invention in that the combination does not specifically disclose that the monitoring and detecting of fault is performed by computer codes or programs stored in a computer-readable storage medium. However, it well known that codes can be written to perform various functions. Wei et al is cited to show computer codes or program for detecting faults. In col. 16, lines 27-35, Wei et al disclose computer program stored in a computer-readable storage medium for detecting fault. Therefore, it would have been obvious to a person of ordinary skill in the art to provide computer program to perform function for the system of the combination above. One of ordinary skill in the art would have been motivated to do this in order to facilitate and automate network monitoring.

Regarding claim 25, Levy et al discloses optical communication system comprising:

means for receiving indications of whether a data optical signal is received successfully from a plurality of monitor locations along an optical link (paragraphs [0012-0013, 0022]); and

means for determining a location of said fault to be beyond a last monitor location receiving said optical signal successfully (see paragraph [0014-0016).

Levy et al differs from the claimed invention in that Kawano does not disclose detecting number of error at each monitor locations. Kelty et al teach optical performance monitoring which determine fault based on number of detected error (see col. 7, lines 1-19 and 58-65). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to method or performance monitoring by detecting number of errors as taught by Kelty et al. One of ordinary skill in the art would have been motivated to do this in order to isolate and distinct faults.

Furthermore, the combination of Levy et al and Kelty et al discloses optical transmission system and method for monitoring and detecting fault as discussed above and differ from the claimed invention in that the combination does not specifically disclose that the monitoring and detecting of fault is performed by computer codes or programs stored in a computer-readable storage medium. However, it well known that codes can be written to perform various functions. Wei et al is cited to show computer codes or program for detecting faults. In col. 16, lines 27-35, Wei et al disclose computer program stored in a computer-readable storage medium for detecting fault. Therefore, it would have been obvious to a person of ordinary skill in the art to provide computer program to perform function for the system of the combination above. One of ordinary skill in the art would have been motivated to do this in order to facilitate and automate network monitoring. Moreover, it is well known that the instructions or codes

as taught by the combination of Kawano, Jacob et al and Wei et al is executed by a processor.

Response to Arguments

8. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
June 12, 2006
David Ruhl